

ORIGINAL

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554

RECEIVED

OCT - 1 1999

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

CC Docket No. 99-272

DOCKET FILE COPY ORIGINAL

In the Matter of )

Merger of )  
Qwest Communications )  
International, Inc., and )  
US WEST, Inc. )

Applications for Transfer of Control )

COMMENTS OF  
RHYTHMS NETCONNECTIONS, INC.

Rhythms NetConnections Inc.  
Jeffrey Blumenfeld  
Chief Legal Officer-General Counsel  
5933 S. Revere Parkway  
Englewood , CO 80112  
303.476.2222  
303.476.5700 facsimile  
<jeffb@rhythms.net>

James R. J. Scheltema  
Blumenfeld & Cohen  
Technology Law Group  
1625 Mass. Ave., NW, Suite 300  
Washington, DC 20036  
202.955.6300  
202.955.6460 facsimile  
<jim@technologylaw.com>

October 1, 1999

No. of Copies rec'd 014  
List ABCDE

## TABLE OF CONTENTS

I.	INTRODUCTION.....	2
II.	MERGERS CAN BE PERMITTED ONLY WHERE THERE IS NO DAMAGE TO DEPLOYMENT OF ADVANCED SERVICES.....	2
III.	THE MERGER BETWEEN QWEST AND US WEST IS NOT IN THE PUBLIC INTEREST BECAUSE IT THREATENS PROVISION OF ADVANCED SERVICES....	4
IV.	THE COMMISSION MUST MANDATE PRE-CONDITIONS TO MITIGATE THE POTENTIAL FOR DAMAGE TO DEPLOYMENT OF ADVANCED SERVICES POSED BY THE QWEST/US WEST MERGER. ....	6
A.	US WEST MUST PROVIDE FOR COLLOCATION AT THE REMOTE TERMINAL AND OTHER PREMISES.....	6
B.	US WEST MUST PROVIDE WORK-AROUNDS AND SOLUTIONS TO THE PROBLEMS ASSOCIATED WITH THE PRESENCE OF DIGITAL LOOP CARRIER. ....	7
C.	US WEST MUST PROVIDE EFFICIENT AND PRACTICAL OPERATIONS SUPPORT SYSTEMS FOR ADVANCED SERVICES CUSTOMERS INCLUDING FULL ACCESS TO LOOP MAKEUP DATA BASES.....	8
V.	CREATION OF A SEPARATE SUBSIDIARY FOR US WEST’S RETAIL ADVANCED SERVICES ASSISTS IN PREVENTING ANTI-DISCRIMINATORY TACTICS AND PROMOTES COMPETITION FOR ADVANCED SERVICES.....	10
VI.	CONCLUSION: THE COMMISSION MUST MANDATE MERGER PRE-CONDITIONS INCLUDING CREATION OF A SEPARATE SUBSIDIARY FOR US WEST’S ADVANCED SERVICES RETAIL FUNCTION AND ENFORCE COMPLIANCE. ....	12

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In the Matter of	)	
	)	
Merger of	)	
	)	
Qwest Communications	)	CC Docket No. 99-272
International, Inc., and	)	
US WEST, Inc.	)	
	)	

**COMMENTS OF  
RHYTHMS NETCONNECTIONS, INC.**

Rhythms NetConnections Inc. and the Rhythms Links Inc. family of subsidiaries (collectively "Rhythms"), by its attorneys, submit these Comments pursuant to the Commission's Invitation for Comments<sup>1</sup> on the August 19, 1999 application of Qwest Communications International, Inc. ("Qwest") and US West, Inc. ("US West") (collectively "Qwest/US West"). These two entities filed applications under Sections 214 and 310(d) of the Communications Act of 1934 as amended, 47 U.S.C. §§ 214, 310(d) and Sections 34-39 of the Cable Landing License Act, 47 U.S.C. §§ 34-39, requesting Commission approval for the transfer of control licenses and authorizations held by subsidiaries of the two companies in connection with the proposed merger of US West with and into Qwest.

---

<sup>1</sup> Qwest Communications International Inc. and US West, Inc. Seek FCC Consent For a Proposed Transfer of Control, Public Notice, CC Docket No. 99-272, DA 99-1775 (rel. Sept. 1, 1999).

## **I. INTRODUCTION**

The policy of the Telecommunications Act of 1996<sup>2</sup> (“the Act”) is to encourage the development of local competition in the telecommunications industry. Without significant safeguards, the proposed merger between Qwest and US West will discourage the development of competition for advanced services in US West’s fourteen-state region.

## **II. MERGERS CAN BE PERMITTED ONLY WHERE THERE IS NO DAMAGE TO DEPLOYMENT OF ADVANCED SERVICES.**

Deployment of advanced services providing “broadband” facilities is in the public interest. Indeed, the 1996 Act in its § 706 mandate and § 254 provisions on universal service require the Commission to “enhance... access to advanced telecommunications and information services”<sup>3</sup> for public classrooms and institutions and “encourage deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans... by utilizing, in manner consistent with the public interest, convenience, and necessity, ... measures that promote competition in the local telecommunications market...”<sup>4</sup> This Commission has demonstrated a commitment to bringing advanced services to the public with its orders addressing advanced services issues.<sup>5</sup> From the onset, competitive local exchange carriers (“CLECs”), such as Rhythms, have been the vanguard in introducing innovative technologies and providing solutions to consumers hunger for advanced services. Rhythms, like other advanced service providers, has been aggressively deploying facilities throughout the country.<sup>6</sup>

---

<sup>2</sup> Telecommunications Act of 1996, Pub.L. No. 104-104, 110 Stat.5b, *codified at* 47 U.S.C. § 151.

<sup>3</sup> Act at § 254.

<sup>4</sup> Section 706(a).

<sup>5</sup> *See, e.g.*, In determining the role of the ILECs to accomplish the directive of Section 706, the Commission required ILECs to make available to competitors the facilities and access necessary to provide DSL services. *Advanced Services Order*, ¶ 32; *see also Id.* ¶ 45-80.

<sup>6</sup> Rhythms presently provides DSL services in 45 MSAs in 26 markets across the United States, including those in Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Illinois, Maryland,

The proposed merger of Qwest and US West threatens the public benefits this nascent competition brings. First, the presence of competitors incents investment by the incumbent local exchange carrier (“ILEC”) as well as providing alternatives to ILEC services. Second, increased competition asserts downward pricing pressure and spurs innovation. Finally, competitors such as Rhythms have been consistently more innovative than US West in the services offered and the range of customers served. As just one example, Rhythms offers DSL services over loop lengths well in excess of US West’s “MegaBit” service.<sup>7</sup>

Without competitors such as Rhythms, US West has no incentive to upgrade its advanced service offerings, or even provide them at all. DSL technologies existed before the 1996 Act, yet were not offered to customers by US West until the Act compelled opening the telecommunications markets to competition. Arguably US West would otherwise be loath to offer advanced services in order to protect access revenues from the threat of IP telephony and protect its lucrative market for T-1 services. By offering alternative methods to gain access to broadband service applications, advanced service CLECs compel US West to counter the CLECs’ competitive threat with a competitive response. US West’s attempts to limit competitors offerings minimizes its exposure to competitive threats as well as limiting the degree to which it must respond. Inevitably, the true loser where competition is not allowed to thrive is the public interest.

There is no need to debate the relative capabilities of a telecommunications market dominated by continued regulation of a monopoly versus a competitive market with multiple providers in proliferating the availability of advanced services. Congress has done this and

---

Massachusetts, Michigan, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Virginia, Washington and Wisconsin. Rhythms plans to offer DSL in a total of thirty four markets by the end of 1999.

<sup>7</sup> US West’s advanced service DSL, i.e., “MegaBits” offering is currently limited to ADSL, with a loop length limitation of 18k feet. Rhythms, in contrast, offers IDSL and SDSL in addition to ADSL and has provisioned

provided perhaps the most compelling and simplest of arguments for protecting the nascent competitive data telecommunications market: it's the law.

**III. THE MERGER BETWEEN QWEST AND US WEST IS NOT IN THE PUBLIC INTEREST BECAUSE IT THREATENS PROVISION OF ADVANCED SERVICES.**

The proposed merger between Qwest and US West threatens the viability of the competitive market for advanced services. Before the Commission approves the proposed merger, it should require Qwest/US West to demonstrate that the merger is in the public interest and beneficial to the local telecommunication industry and in particular the advanced services segment, given Congress' directives and the increasing use of these services in the lives of ordinary users.

Mergers that encourage competition, including the deployment of broadband capable services, are in the public interest. Section 706, Pub.L. 104-104, Title VII, § 706, Feb. 8, 1996, 110 Stat. 153, reproduced in 47 U.S.C. § 157, requires the Commission to encourage the deployment of advanced telecommunications capability to all Americans by using, among other methods, regulation that will remove barriers to infrastructure investment. As an example, US West's use of the Loop Facilities Administration Control System ("LFACS") data base discriminates against DSL-based competitors. Thus, the Commission should require US West to change it. Otherwise, US West will continue to use its data base to discourage companies from investing in broadband. Finally, because US West's current LFAC database discriminates against DSL-based competitors, the Commission is obligated to use regulation to remove these types of barriers to investment in infrastructure.

Qwest/US West effectively limits its competitors ability to deploy facilities and serve

---

advanced services with loops in excess of 35k feet.

customers by strategically deploying advanced services through digital loop carriers (“DLC”) and by limiting access to loop makeup data bases.<sup>8</sup> As of a year ago, US West had digital loop carrier in seventeen percent of its loop facilities.<sup>9</sup> Its preference for DLC will hinder the deployment of broadband capability by companies like Rhythms that deploy broadband through copper technologies using digital subscriber lines (“DSL”), because of the discriminatory and anticompetitive manner in which US West provisions its own and its competitors’ loops.<sup>10</sup>

Instead of supplying the requisite copper (unimpaired by additional electronics) requested by Rhythms, US West’s LFACS is programmed to select loop facilities deployed over DLC as the first choice for provisioning loops for DSL-based carriers. In fact, “integrated” DLC is US West’s first provisioning choice and “universal” DLC is second, with traditional copper facilities last. US West is well aware that most types of DSL cannot be transmitted over a DLC provisioned line. Thus, US West’s system makes it tedious and time-consuming for competitors to order loops and is a barrier, rather than a service, to its wholesale customers.

Pursuant to 47 U.S.C. § 157, the Commission has an obligation to use regulation to remove barriers to investment of broadband by alternative providers. US West’s tactics of blocking competition by not offering Rhythms copper loops as a first choice must be stopped. Rhythms is entitled to access US West’s network at parity with the access US West affords itself or its affiliates. Hence, the Commission should require Qwest/US WEST to program its loop facilities database(s) to recognize and supply copper non-loaded loops as a first choice for companies that are DSL-based providers.

Similarly, US West should not be permitted to add extension technology on loops

---

<sup>8</sup> The Commission was clear that “incumbent LECs should not unilaterally determine what technologies LECs and incumbent LECs may deploy.” *Advanced Services First Report and Order* ¶ 63.

<sup>9</sup> *ADSL@DLC.NOW*, MCIWorldCom (May 1999).

<sup>10</sup> The provision of ADSL and certain other advanced services is dependent on high throughput over copper

unilaterally. US West requires the application and implementation of “extension technologies” on *all* ISDN capable loops that it provisions. By exercising this prerogative without the assent of its wholesale customer, US West levies an additional recurring charge for the Extension Technology that may be technically unnecessary and only serves the purpose of increasing Rhythm’s monthly recurring charges.

**IV. THE COMMISSION MUST MANDATE PRE-CONDITIONS TO MITIGATE THE POTENTIAL FOR DAMAGE TO DEPLOYMENT OF ADVANCED SERVICES POSED BY THE QWEST/US WEST MERGER.**

The Commission is bound by the public interest and law to promote competition for advanced services. In order to do so, yet permit the applicants to merge, certain pre-conditions are necessary. Since US West is the dominant incumbent local exchange provider, only when there is full and irreversible competition in the market for advanced services should the applicants be allowed to merge without such pre-conditions.

**A. US WEST MUST PROVIDE FOR COLLOCATION AT THE REMOTE TERMINAL AND OTHER PREMISES.**

Loop length limitations make the distance from the customer to the central office critical. Since xDSL services are restricted in deployment based on DSL-capable facilities, (*e.g.*, copper), collocation proximate to customers is required. Therefore, one of the merger pre-conditions must be allowing carriers to collocate at remote terminals and other ILEC premises in order to access existing copper facilities.<sup>11</sup> This is consistent with the most recent state decision concerning this issue released in Pennsylvania on September 30, 1999.<sup>12</sup> Because DSL is a copper-based

---

wire that does not have impediments.

<sup>11</sup> “Premises refers to an incumbent LEC’s central offices and serving wire centers, *as well as all buildings or similar structures owned or leased by an incumbent LEC that house its network facilities*, and all structures that house incumbent LEC facilities on public rights-of-way, including but not limited to vaults containing loop concentrators or similar structures.” 47C.F.R. § 51.5.

<sup>12</sup> “Remote terminal collocation must be permitted, even if that means that at some locations the CLECs



technology, the equipment must be located at the end of the copper wherever that occurs in the loop. Thus, Rhythms and other data CLECs often need to intersect traffic at a point in the loop prior to the introduction of US West's digital loop carrier, e.g., where the copper distribution plant meets the fiber feeder.

Often (and ever-increasingly) US West has a fiber-based distribution system. In certain circumstances, Rhythms is still able to provide advanced services, but often these are restricted to lower transmission speeds. In other cases, fiber feeder may preclude competitors such as Rhythms from offering alternatives altogether. Where US West has deployed universal digital carrier, for example, Rhythms can provide DSL-based advanced services, but is limited to speeds of 128k. This is far less than Rhythms capability to offer 7.1 megabits per second. Further, it is not competitive with US West's "MegaBit 256" offering, which transmits data twice as fast.

**B. US WEST MUST PROVIDE WORK-AROUNDS AND SOLUTIONS TO THE PROBLEMS ASSOCIATED WITH THE PRESENCE OF DIGITAL LOOP CARRIER.**

Worse yet are circumstances where US West's discriminatory and anticompetitive loop administration hurts consumers by limiting the choices available to them. Since integrated digital loop carrier has direct termination, at US West's switch, there is no opportunity to separate data traffic prior to the digital loop carrier, thereby denying Rhythms the ability to separate data from the ILEC. It is circumstances such as these which require work-arounds to enable competitors access to the network. US West's deployment of digital loop carrier poses no threat to its ability to provide advanced services. Because of its monopoly position, its advanced services retail arm enjoys direct connection with the network and is not jeopardized by integrated

---

would need to provide separate facilities that are interconnected at BA-PA's remote terminal." *Joint Petition of Nextlink Pennsylvania, Inc. et. al. Docket No. P-00991648; Joint Petition of Bell Atlantic Pennsylvania, Inc. et. al.*

digital loop carrier (nor, for that matter, need it collocate under the same circumstances required by CLECs).

One potential solution to the presence of digital loop carrier is for US West to provision its network with DSLAMs capable of single or multi-hosting and providing CLECs with access to these single or multi-hosted DSLAMs.<sup>13</sup> This would help alleviate problems of collocating at the remote terminal and other premises due to space constraints. This should be available as an alternative to collocation since it offers an efficient means of solving DLC associated problems in certain circumstances and optimizes the limited premium space available to place equipment.

US West must be compelled to share technical data enabling successful interconnection with advanced service providers and encouraged to work with vendors to provide technically feasible solutions to the problems encountered in the provision of advanced services. The proliferation of advanced services is clearly a public benefit and only by assisting, rather than by inhibiting, alternative providers of advanced services may the public one day enjoy such capabilities ubiquitously.

**C. US WEST MUST PROVIDE EFFICIENT AND PRACTICAL OPERATIONS SUPPORT SYSTEMS FOR ADVANCED SERVICES CUSTOMERS INCLUDING FULL ACCESS TO LOOP MAKEUP DATA BASES.**

Pursuant to its obligation to “provide competitive LECs with sufficient detailed information about the loop so that competitive LECs can make an independent determination

---

*Docket No. P-00991649*, PA PUC Opinion and Order at 97 (Aug. 26, 1999).

<sup>13</sup> The PA PUC indicated that industry members are working with equipment vendors to develop multi-hosting DSLAMs and ordered that upon resolution of partitioning issues, multi-hosting or shared DSLAM arrangements will be made through [Bell Atlantic-Pennsylvania, Inc.'s] Tariff 216. *Id.* at 110; *included herein as Attachment A*.

about whether the loop is capable of supporting the xDSL equipment they intend to install”<sup>14</sup>, US West must be compelled to provide full access to the raw data populating its loop makeup data bases, similar to the Order the PA PUC recently released.<sup>15</sup> (See, Attachment A). One of the most aggravating problems encountered by competitive advanced services providers such as Rhythms is the inefficient and impractical operations support system offered by US West. Automated solutions must be provided to allow carriers full access to loop makeup databases.<sup>16</sup> Without full access to the raw data that populates US West’s existing loop makeup databases, competitors are stymied in offering innovative broadband services and instead are, at best, limited to mimicking the services that US West provides.<sup>17</sup> Unlike US West, Rhythms is currently unable to determine with accuracy whether or not it can provision its services over a given loop and is able to provision services to a much broader range of customers than can US West. Therefore, by imposing its own limited view of these services on Rhythms, US West denies service to consumers Rhythms is able and willing to serve.

The arbitrary determinations made by US West in systems provisioning loops, coupled with competitors inability to obtain accurate loop make up information, prevents competitors from gaining the same automatic flow-through of loops for advanced services that US West’s retail function enjoys. In contrast to the fully automated flow-through from ordering to installation, competitors’ loop orders fall-out and must be manually processed introducing delay and opportunities for errors to arise. This is frustrating to competitors; it is incomprehensible to

---

<sup>14</sup> *Advanced Services NPRM*, ¶ 157.

<sup>15</sup> *Joint Petition of Nextlink Pennsylvania, Inc. et. al. Docket No. P-00991648; Joint Petition of Bell Atlantic Pennsylvania, Inc. et. al. Docket No. P-00991649*, PA PUC Opinion and Order at 111 (Aug. 26, 1999).

<sup>16</sup> Competitors must have access to information, including databases and records, necessary for interoperability of both carrier’s networks. S.Rep. No. 104-23, at 19-20 (1995).

<sup>17</sup> Ameritech has obligated itself to provide access to such information as a merger condition. See, *In the Matter of Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations form Ameritech Corporation, Transferor, to SBC Communications, Inc., Transferee*, CC Docket No. 98-141, Proposed

their customers. In sum, the state of US West's OSS for advanced services is woefully inadequate, since it limits the information available to Rhythms (and the resulting services the public is able to buy from Rhythms) and discriminates in the provisioning of DSL capable loops by design and adds considerable delay not suffered by its own retail advanced services arm.

**V. CREATION OF A SEPARATE SUBSIDIARY FOR US WEST'S RETAIL ADVANCED SERVICES ASSISTS IN PREVENTING ANTI-DISCRIMINATORY TACTICS AND PROMOTES COMPETITION FOR ADVANCED SERVICES.**

The most effective enforcement mechanism available to the Commission is the market itself. By placing US West's retail arm for advanced services in the same position as that of Rhythms and other competitors by mandating retail advanced services be provided solely through a structurally separate subsidiary, the Commission helps assure the end to discriminatory provisioning practices. It is much easier for the Commission and competitors to evaluate whether parity is actually achieved between the monopoly's subsidiary and the new entrant where structural separation has taken place. When US West's retail arm is forced to collocate to interconnect to US West's network; when it has the same limited access to loop makeup data bases; when it no longer receives automatic flow through of loop provisioning orders; in sum, when it experiences the same difficulties Rhythms and other competitive advanced services providers experience, it may compel the wholesale arm to provide improvements to the ordering and provisioning processes.

Structural separation in and of itself is only a partial solution. Without competition for advanced services, US West may lapse into the malaise of offering conventional voice-centric technology applications exclusively where it has reaped rich rewards as a result of being a monopoly rather than have to compete for sales in a competitive market for advanced services.

---

Conditions for FCC Order Approving SBC/Ameritech Merger, ¶ 23 (July 1, 1999).

As indicated previously, the burgeoning growth of new data transmission technologies threatens US West's revenues from its embedded base of services. By restricting the data transmission speed, the loop lengths provided to CLECs and variety of services, US West may disappoint public expectations for new technologies such as data transmission used for internet-based applications. Thus it becomes important for this Commission to promote competition and the spread of advanced services by granting approval of the merger upon satisfaction of certain conditions. Rhythms recommends that this Commission use the Pennsylvania Public Utility Commission's recent order concerning digital services and other high speed services as a model when crafting appropriate pre-conditions. (*See*, Attachment A).

The Commission should make the conditions it imposes on the applicants pre-conditions, rather than conditions subsequent. It is far easier to gain the cooperation of the parties in implementing conditions when they are seeking to gain approval for their merger. It is equally obvious that the conditions are more certain to be effective when the role of the Commission centers on continued enforcement of the conditions to prevent the applicants' backsliding when compared to the role the FCC would play if it needed to compel implementation and compliance after the merger was consummated. The withholding of approval for the merger is a far greater yolk than the threat by the FCC of trying to unravel the entities once merger has been accomplished and their distinct entities are melded.

In addition to structural separation the Commission must establish meaningful and certain penalties sufficient to inhibit violations of the pre-conditions necessary for the continued proliferation of advanced services. Further, these pre-conditions should not rely merely upon competitors to bring enforcement complaints. Instead, the Commission should maintain a vigilance to assure compliance with its Order(s).

**VI. CONCLUSION: THE COMMISSION MUST MANDATE MERGER PRE-CONDITIONS INCLUDING CREATION OF A SEPARATE SUBSIDIARY FOR US WEST'S ADVANCED SERVICES RETAIL FUNCTION AND ENFORCE COMPLIANCE.**

The merger between US West and Qwest threatens the competitive landscape for advanced services. Competitive advanced service providers offer the public the benefits of innovative services and exert downward pricing pressure on the incumbent's offerings. Therefore it is critical to preserve and promote the nascent competition developing for advanced services.

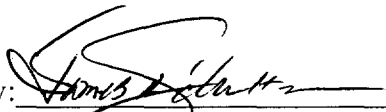
Certain merger pre-conditions are required to mitigate the potential for damage to the competitive advanced services markets in US West's service territories. Among these are methods for reducing the discriminatory effects that the presence of digital loop carrier dictate. US West must be ordered to provide collocation at any technically feasible point of interconnection, such as a remote terminal. As an alternative, and supplement, US West should be compelled to provide single or multi-hosted DSLAMs. US West must also adapt its systems to allow competitors full and mediated automated access to the raw data populating the various loop makeup databases. Further, the method for provisioning loops for advanced services should reflect the needs of Rhythms and other carriers to copper loops without inhibitors such as load coils in order to offer advanced services to the public. The use of extension technology should be optional, as requested by the CLEC, rather than a given. The system must be changed to search for appropriate, i.e., copper, loops rather than specifically targeting, by priority, the worst possible loops for providing advanced services.

None of these pre-conditions are meaningful if the merged entity does not abide by them. The best time to assure compliance is prior to allowing a merger when the parties still have the

incentive of approval to comply with the pre-conditions. Naturally, the parties will have less interest in adapting systems to solve problems experienced by competitors once merger approval has been granted. This alone is sufficient reason to require pre-conditions rather than conditions subsequent to merging. In addition, there should be penalties sufficient to prevent backsliding once compliance is achieved and the merger is approved. These penalties should not only rely on competitors enforcement actions, but the Commission should also maintain vigilance to assure the merged entities are adhering to the letter of its law.

Respectfully submitted,

Rhythms NetConnections Inc.  
Jeffrey Blumenfeld  
Chief Legal Officer-General Counsel  
5933 S. Revere Parkway  
Englewood , CO 80112  
303.476.2222  
303.476.5700 facsimile  
<jeffb@rhythms.net>

By:   
James R. J. Scheitma  
Blumenfeld & Cohen  
Technology Law Group  
1625 Mass. Ave., NW, Suite 300  
Washington, DC 20036  
202.955.6300  
202.955.6460 facsimile  
<jim@technologylaw.com>

*Attorneys for Rhythms NetConnections Inc.*

Dated: October 1, 1999

**VII. DIGITAL SERVICES AND OTHER  
HIGH SPEED TECHNOLOGY ISSUES**

This proceeding has presented the Commission with an unprecedented opportunity to promote the deployment of advanced services throughout the Commonwealth by way of competition rather than regulatory mandate. Broadband deployment has heretofore been addressed exclusively within the context of Chapter 30 proceedings initiated by incumbent local exchange carriers. That approach was based on the theory that broadband deployment would come to Pennsylvania from the incumbents in exchange for alternative regulation. This proceeding has demonstrated that competitive local exchange carriers also have the potential to deploy broadband technologies and that competition will promote the widespread deployment of advanced services. Competition, together with Chapter 30 incentives, will provide deployment of advanced services much faster than either standing alone.

Hardly a day passes without an exposure to the internet and to the advanced services that might allow us to use one telephone line for phone calls, internet connection, faxing, data transmission, and audio and video applications. Digital Subscriber Line (DSL) technologies, sometimes referred to as xDSL, may enable plain old telephone lines to carry high-speed, high-content transmissions. Such technological developments hold the promise of adapting existing loop facilities to broadband capability less expensively than anticipated in 1993 at the passage of Act 67 of 1993 (Chapter 30) and certainly much more rapidly than the twenty (20) years that was anticipated when the 2015 target was established by Act 67.



As the FCC noted in its Advanced Services Order:

[D]igital subscriber line technologies are making it possible for ordinary citizens to access various networks, such as the Internet, corporate networks, and governmental networks, at high speeds through the existing copper telephone lines that connect their residences or businesses to the incumbent LEC's central office. The existing infrastructure is being used in new ways that make available to average citizens a variety of new services and vast improvements to existing services. The ability of all Americans to access these high-speed, packet-switched networks will likely spur growth and development as a nation.<sup>112</sup>

#### **A. Shared DSLAM Arrangements**

One of the innovative technologies addressed in this proceeding is the potential use and interconnection of a Digital Subscriber Line Access Multiplexer (DSLAM) to provide advanced telecommunications services.<sup>113</sup> DSLAMs are currently being deployed in the telecommunications network. In order to enhance the availability of DSLAM technology, industry members have suggested that they will request equipment vendors to develop multi-hosting DSLAMs and, in doing so, resolve related partitioning issues pertaining to network management, security, network reliability and operations. Upon resolution of these partitioning issues, multi-hosting or shared DSLAM arrangements will be made available to CLECs through Tariff 216. (See: P-00991648, ¶ 35.).

---

<sup>112</sup> First Report and Order and Further Notice of Proposed Rulemaking, FCC 99-48, In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147 (rel. March 31, 1999) at Para. 5.

<sup>113</sup> At Section VI of this Order, we direct that BA-PA provide for the collocation of dedicated DSLAMs.

## B. Access to Loop Database Information

By this Order, we are implementing policies that grant CLECs access to BA-PA's loops that permit the provisioning of an array of DSL services. A predicate to providing this array of services is access to a limited set of key loop make-up information that resides in BA-PA's existing databases. Under no circumstances will BA-PA be permitted to limit the services CLECs provide over unbundled loops to those that mirror its own DSL deployment, as BA-PA suggests. BA-PA Witness Stern, BA-PA St. No. 3.0, p. 26. To permit such restriction would not only contravene many of the very competitive benefits that the Act, the FCC and this Commission have sought to encourage, but would violate the express statutory and legal requirements of the Act and the mandate of FCC.

The competitive provision of xDSL services in Pennsylvania is introducing the benefits of broadband telecommunications services for Commonwealth business and residential consumers in urban, suburban and rural areas. ACI and Covad are both aggressively rolling out DSL services in Pennsylvania.<sup>114</sup> Indeed, it is this competition that has prompted ILECs—including BA-PA—to introduce their own xDSL services. The Commission identified ADSL technology as a means of bringing broadband telecommunications services to Pennsylvania consumers as early as 1993—even prior to the enactment of Chapter 30.<sup>115</sup>

In contrast, BA-PA only recently introduced its own ADSL offering—InfoSpeed™ DSL—in the Philadelphia and Pittsburgh metropolitan market areas. *Id.*, ACI St. No. 1.0, p. 12, Attach. EHG-2. In this respect, the largest ILEC in Pennsylvania has introduced its ADSL broadband service approximately six (6) years after it was formally identified as a broadband alternative that can be deployed over ordinary copper wire loops to Pennsylvania businesses and residences in the Pa.

---

<sup>114</sup> ACI Witness Geis, ACI St. No. 1.0, p. 4; Covad Witness Clancy, Covad St. No. 1.0, p. 2-3.

<sup>115</sup> See Pennsylvania Telecommunications Infrastructure Study, Deloitte & Touche and DRI/McGraw-Hill, Vol. IV, March 1993, at XI-12 – XI-13 (Pa. Telecom. Infrastructure Study). The Pa. Telecom. Infrastructure Study was designed to “provide public policymakers with a foundation for establishing future telecommunications policy and direction for Pennsylvania[.]” Vol. I at I-1.

Infrastructure Study.<sup>116</sup> This BA-PA ADSL deployment has materialized approximately five (5) years after BA-PA received its Chapter 30 Alternative Regulation and Network Modernization Plan approval on June 28, 1994, at Docket No. P-00930715, and three (3) years after the passage of the Act.

If the full benefits of competition in the provision of DSL services in Pennsylvania are to be realized, *i.e.*, introduction of additional and better services and declining prices, such competition must be robust and sustainable. These conditions will not be met if CLECs are denied access to critical facilities and data or are forced to pay exorbitant charges for loops, charges that lack a basis in forward-looking pricing principles. BA-PA's delay in introducing its ADSL service suggests to us that the lack of competition in the relevant telecommunications services market has forestalled the benefits of technological innovation and the availability of broadband services to Pennsylvania consumers.

Both settlement proposals provide that BA-PA will provide ADSL and HDSL capable loops at the same prices as analog loops.<sup>117</sup> In a prior section of this Order we adopted those proposals. However, neither settlement proposal is sufficient because neither provides for the clean copper loops necessary to provide other types of DSL loops that will enable data CLECs to fully meet the needs of and provide new services to consumers in the Commonwealth.

DSL providers must obtain "clean copper" ILEC loops in order to provide the full panoply of xDSL services.<sup>118</sup> The term "clean copper" refers to loops that are free

---

<sup>116</sup> In fact, the Pa. Telecom. Infrastructure Study noted at that time:

ADSL's value is based on the perception that many residential applications require higher bandwidth in the downstream direction only, such as multimedia and video on demand applications, including access to educational materials. From a technical perspective, this asymmetry facilitates use of a *single copper pair* for higher bandwidth services, since it diminishes problems of "crosstalk" between higher bandwidth services if they were to share the same copper pair.

Pa. Telecom. Infrastructure Study at XI-13.

<sup>117</sup> 1648 Petition ¶ 16; 1649 edition ¶ 65-66.

<sup>118</sup> ACI Witness Geis, ACI St. No. 1.0, p. 10.

of load coils, repeaters , Digital Added Main Lines (DAMLs), and Digital Loop Carrier (DLC) systems, and have a limited number of bridged taps. These devices interfere with xDSL technologies and must be removed from or otherwise dealt with so that the loop can be used to provision DSL service.<sup>119</sup> They are not typically installed on a copper loop if the loop is below a certain length.<sup>120</sup> Once clean loops are identified, an array of DSL technologies can be offered to the end user.

DSL transmission technology is capable of delivering high speed data transmission of up to 7 million bits per second (7 Mbps) by employing the same copper loop ordinarily used for local telephone service. ACI Witness Geis, ACI St. No. 1.0, p. 3. This provides services significantly faster than a 56 kbps dial-up modem.<sup>121</sup> ACI has successfully deployed numerous types of DSL-technologies--denoted collectively as "xDSL"—on copper loops, including ADSL, Rate Adaptive Digital Subscriber Line (RADSL), High bit rate Digital Subscriber Line (HDSL), Symmetric Digital Subscriber Line (SDSL) and ISDN Digital Subscriber Line (IDSL). The acronym "xDSL" is used to describe the broad category of DSL technologies encompassing all of the above types of DSL-based services.<sup>122</sup> Id. at 4-6, and Attach. EHG-3. ACI testified that it plans to deploy ADSL (including RADSL), SDSL, and IDSL in Pennsylvania. Although the particular type of DSL technology to be used is a function of a number of variables, ACI will typically use RADSL on shorter clean copper loops, SDSL on clean copper loops of intermediate length, and IDSL on long loops or on loops that are carried on fiber DLC systems. Using a variety of DSL technologies, CLECs can tailor service to bring the most functionality to each end user based on the particular characteristics of the loop serving that customer and the customer's service requirements.

---

<sup>119</sup> ACI Witness Geis, ACI St. No. 1.0, p. 11-13.

<sup>120</sup> E.g., Bell Communications Research (Bellcore) engineering standards call for the placement of load coils only in loops that exceed 18,000 ft in length. Id. at 11-12 and Attachment EHG-3.

<sup>121</sup> Id. at 4.

<sup>122</sup> In the California territory of Pacific Bell, ACI has widely deployed RADSL, SDSL and IDSL. ACI has also deployed these three types of xDSL in Illinois, Massachusetts, New York and Pennsylvania, and will shortly deploy them in several additional states. Id. at 7-9.

In contrast, BA-PA indicated that its DSL service offering is limited to customers served by relatively short loops<sup>123</sup> that require no conditioning.<sup>124</sup> This testimony indicates that BA-PA has no intention of serving a significant portion of the Pennsylvania market – the portion that is not presently served by an “ideal” loop, including loops over 12,000 feet.<sup>125</sup> We cannot permit BA-PA to deny these customers the substantial benefits of DSL from CLECs simply because BA-PA has made the strategic decision to ignore this substantial market segment.

We must ensure that CLEC providers of xDSL services have access to clean copper loops required to provision competitive DSL services. Only with such access can CLECs meet the needs of Pennsylvania consumers that would otherwise go unserved by ILEC service offerings. Similarly, the BA-PA loop provisioning intervals for CLEC xDSL providers must be the same as those for BA-PA’s DSL retail services.<sup>126</sup> Further, to the extent that BA-PA limits the type of loops over which it will provide DSL services -- if it will not provision DSL services on loops of a certain length, for example -- the Commission will nonetheless order BA-PA to make these loops available to competitors whose technology enables them to provide DSL services over such loops.

Under FCC rules, ILECs cannot use, as a basis for refusing to provision DSL-capable loops of any type, the argument that they do not yet provide certain DSL services themselves.<sup>127</sup> The FCC expressly concluded that “section 251(c)(3) [of TA-96] does not limit the types of telecommunications services that competitors may provide over unbundled elements to those offered by the incumbent ILEC.”<sup>128</sup> In addition, the FCC’s Advanced Services Order specifies that “incumbent LECs *should not unilaterally determine* what technologies LECs, both competitive LECs and incumbent LECs may deploy.”<sup>129</sup> (Emphasis added.) In conformity with these determinations, we direct BA-PA

---

<sup>123</sup> Tr. 1027-1028.

<sup>124</sup> Id.

<sup>125</sup> Id.

<sup>126</sup> Id. at 20-21.

<sup>127</sup> Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket 98-147, Memorandum Opinion and Order, FCC 98-188 ¶ 53 (rel. Aug. 7, 1998).

<sup>128</sup> Id., quoting First Report and Order, 11 FCC Rec. at 15,691-92 ¶ 379.

<sup>129</sup> Advanced Services Order ¶ 63.

to provision DSL-capable loops that are free of intrusive devices as requested by CLECs. By grafting these federal mandates onto the 1648 proposal the Commission can best ensure the rapid, widespread deployment of DSL.

The FCC has further directed that, “incumbent LECs must ‘take affirmative steps to condition existing loop facilities to enable requesting carriers to provide services not currently provided over such facilities’” including, for example, “a loop free of loading coils, bridged taps, and other electronic impediments.”<sup>130</sup> The information BA-PA proposes to provide in its loop qualification database is insufficient because this database was developed to support the specific needs of BA-PA’s more limited ADSL retail offering and does not include crucial loop information needed for other xDSL services. As ACI Witness Geis observes, it does ACI no good to know if a loop is qualified for BA-PA’s retail services. ACI offers a much more comprehensive slate of services for which ACI needs specific data about the loop.

Different DSL technologies are best suited for different loop characteristics. Therefore, CLECs will use a different technology to provide service to an end user with a very long loop, or a loop served by DLC, than one with a short, clean copper loop. Also, to allow CLECs to make service guarantees to customers regarding reliability and speed of digital transmissions, CLECs must know the physical characteristics of the loop.<sup>131</sup> They need this information to make business choices regarding appropriate DSL-based service for that particular loop, as opposed to being forced to settle for BA-PA’s determinations of which DSL service they should deploy.<sup>132</sup> Additionally, access to information about the physical characteristics of the loop will allow a CLEC’s customer service representatives to notify customers in a timely manner regarding the services for which they are eligible. This access will put CLECs at competitive parity with BA-PA. More importantly, CLECs may be able to provide service superior to BA-PA without BA-PA’s imposition of artificial handicaps.<sup>133</sup> According to ACI witness Geis, “[i]t goes without saying that the ability to verify loop

---

<sup>130</sup> Advanced Services Order ¶ 53.

<sup>131</sup> Id. at 19.

<sup>132</sup> Id.

<sup>133</sup> Id. at 19.

make-up and complete the order while the customer is still on the line obviously has a significant sales impact.”<sup>134</sup>

Real-time electronic access to loop make-up information is important for several reasons. First, such electronic access will allow CLECs to determine quickly whether a customer’s loop is suitable for DSL in response to customer inquiries. Second, electronic access allows CLECs greater flexibility in structuring their work force, because on-line systems could be used 24-hours per day to research the suitability of customer loops to support DSL. Third, electronic systems can support much greater volumes of inquiries than will manual systems. Finally, ILECs may have internal electronic pre-ordering and ordering systems available, thereby giving them an advantage in serving customers over CLECs. Time is of the essence in providing pre-ordering information, because the market for high-speed data services, in particular DSL-based services, is growing larger and more competitive every day.<sup>135</sup>

The critical need for loop data coupled with the severely limited loop qualification database proposal presented by BA-PA renders both the settlement proposals’ provisions for access to this database unworkable. The 1649 Petition proposal for giving access to loop data through a Web GUI is inadequate,<sup>136</sup> because it “does not provide a real-time means of obtaining loop information, and is cumbersome because it involves both delay and manual intervention.”<sup>137</sup> Rather, BA-PA must provide real-time access to its loop makeup information on an electronic, fully-automated basis.<sup>138</sup> This access can most easily be accomplished by providing CLECs with access to existing electronic databases that contain the relevant data, such as LFACs.<sup>139</sup>

Where the information is not in an electronic database, BA-PA must provide the information by phone, fax or other manual method that will most quickly

---

<sup>134</sup> ACI Witness Geis, ACI St. No. 1.0, p. 20.

<sup>135</sup> Id. at 23-24.

<sup>136</sup> ILEC Petition ¶ 111.

<sup>137</sup> ACI Witness Geis, ACI St. No. 1.0, p. 21.

<sup>138</sup> Id.

and efficiently enable the CLEC to ascertain the relevant loop characteristics. What is patently clear is that the loop database BA-PA is developing for its retail service is built from these underlying databases.<sup>140</sup> Correspondingly, the CLEC community should provide BA-PA with quarterly updates and prioritized listings of central offices in which CLECs wish to have xDSL loop prequalification information. BA-PA is directed to integrate that information with its own Chapter 30 and retail requirements and resource capabilities. The Commission will, as necessary, resolve any conflicts in prioritization consistent with BA-PA's statutory obligations for balanced deployment among rural, suburban and urban areas.

### C. CONTENTS OF THE LOOP DATABASE

BA-PA Witness Stern testified that BA-PA has developed a loop qualification database that stores loop information necessary for provisioning its retail DSL services.<sup>141</sup> The Commission is persuaded, however, that the availability, structure, utilization, and associated charges of this database are unacceptable.<sup>142</sup> For instance, the development of this database is a "multi-year project," not all of BA-PA's Central Offices are in the database, and most importantly, "not all types of information requested are in the database at this time."<sup>143</sup> Indeed, Stern admitted that this database is essentially structured with loop qualification information that will be of primary value to the provision of BA-PA's own retail ADSL services.<sup>144</sup>

As a result, the database will be of little value to CLECs because it will not provide precise information on the total length of loops that are the subject of CLEC xDSL provider inquiries, and will provide responses only on the metallic length of the loop.<sup>145</sup> Thus, if the CLEC loop qualification inquiry involved a long loop in excess of 12,000-15,000 feet the BA-PA database could disqualify the loop for the CLEC provision

---

<sup>139</sup> Tr. 1014; ACI Witness Geis, ACI St. No. 1.0, p. 20.

<sup>140</sup> Tr. 1013-1014.

<sup>141</sup> Tr. 1014.

<sup>142</sup> BA-PA Witness Stern, BA-PA St. No. 3.0, p. 25. See generally Tr. 1014-1020.

<sup>143</sup> Id.

<sup>144</sup> Tr. 1021-1022.

<sup>145</sup> Id. at 1022.



of xDSL services either because the loop was too long or because part of it was provisioned through DLC. However, the CLEC would not know the exact reason for the disqualification response for the loop in question.<sup>146</sup> There would be a similar lack of precise information even when a 8,000 ft loop became disqualified either because DLC equipment was present or, according to BA-PA, “spectrum management” issues were present in the loop.<sup>147</sup> Further, even if BA-PA collects particularly useful loop information as a result of CLEC inquiries, for example, the presence of load coils or bridged taps, BA-PA will not record this information in any unified automated database.<sup>148</sup> BA-PA must not be permitted to gate CLEC entry into Pennsylvania through a refusal to provide efficient access to crucial loop data. If it does, Pennsylvania consumers will be denied broadband capabilities that are already being provided to customers in other jurisdictions.

**TO ENSURE THAT DSL CARRIERS HAVE EFFICIENT ACCESS TO THE CRUCIAL LOOP INFORMATION REQUIRED FOR DSL SERVICES, BA-PA SHALL IMMEDIATELY PROVIDE CLECS WITH ACCESS TO ANY AND ALL EXISTING DATABASES THAT CONTAIN THE MATERIAL LOOP INFORMATION. FURTHER, UNTIL BA-PA HAS A MECHANIZED SYSTEM IN PLACE, IT MUST PROVIDE MANUAL ACCESS TO THE LOOP MAKEUP INFORMATION AS CLOSE TO A REAL-TIME BASIS AS POSSIBLE, BY PHONE, FAX, OR OTHER MEANS.<sup>149</sup>**

---

<sup>146</sup> Id. at 1023.

<sup>147</sup> Id. at 1023-24.

<sup>148</sup> Tr. 1020.

<sup>149</sup> BA-PA Witness Stern, BA-PA St. No. 3.0, p. 25.

#### D. DATABASE COST RECOVERY

BA-PA proposes to recover a recurring fee of \$0.71 per month per loop for cost recovery related to the development of the database.<sup>150</sup> It is clear from the record that the charge does not reflect forward-looking incremental costs.<sup>151</sup> Furthermore, CLECs -- and consequently their customers -- would pay this substantial loop rate additive in perpetuity, even though for any loop there would be only a single query. There is no justification for a recurring monthly charge of this magnitude for a single query. We therefore direct that once BA-PA has identified the cost of developing this loop database, it shall propose an appropriate dip charge to recover the costs of its establishment, as well as a mechanism for the recovery of any recurring operating and maintenance expense associated with the operation of the database.

#### E. ADDITIONAL ISSUES

The 1649 Petition raises additional issues, including a flat-rate engineering analysis charge for determining whether a loop is xDSL capable, a charge for provisioning xDSL-capable loops,<sup>152</sup> and a proposal to recover spectrum management charges.<sup>153</sup> None of these charges are authorized at this time. BA-PA may develop and propose, for the Commission's consideration, a cost-based, flat-rate engineering analysis charge to determine if a specific loop is qualified or could be qualified, even in an office that has not been surveyed, as well as a charge for provisioning such loops once they are determined to be xDAL-capable. Commission approval shall be necessary prior to implementation of any such charges.

Since the record does not support any decision with respect to spectrum management, we will not consider it further.

---

<sup>150</sup> Tr. 979-80.

<sup>151</sup> Tr. 981.

<sup>152</sup> 1649 Petition ¶112.

<sup>153</sup> 1649Petition ¶ 112 at 38.

## CERTIFICATE OF SERVICE

I, Leslie LaRose, do hereby certify that on this 1<sup>st</sup> day of October, 1999, I have served a copy of the foregoing document via messenger to the following:

  
Leslie LaRose

Chairman William E. Kennard  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8B-201  
Washington, D.C. 20554

Commissioner Susan Ness  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8B-115  
Washington, D.C. 20554

Commissioner Harold Furchtgott-Roth  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8A-302  
Washington, D.C. 20554

Commissioner Gloria Tristani  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8C-302  
Washington, D.C. 20554

Commissioner Michael Powell  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8A-204  
Washington, D.C. 20554

Larry Strickling  
Chief, Common Carrier Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 5C-450  
Washington, D.C. 20554

Dorothy Atwood  
Legal Advisor to Chairman Kennard  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8B-201  
Washington, D.C. 20554

Linda Kinney  
Legal Advisor to Commissioner Ness  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8B-115  
Washington, D.C. 20554

William Bailey  
Legal Advisor to Commissioner  
Furchtgott-Roth  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8A-302  
Washington, D.C. 20554

Sarah Whitesell  
Legal Advisor to Commissioner Tristani  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8A-204  
Washington, D.C. 20554

Kyle Dixon  
Legal Advisor to Commissioner Powell  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 8C-302  
Washington, D.C. 20554

ITS  
Room CY-B402  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Office of Public Affairs  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room CY-C314  
Washington, D.C. 20554

CeCi Stephens  
Common Carrier Bureau  
Policy and Program Planning Division  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 5-C140  
Washington, D.C. 20554

Margaret Egler  
Common Carrier Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 5-C100  
Washington, D.C. 20554

Lauren Kravetz  
Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 4-A163  
Washington, D.C. 20554

Joanna Lowry  
International Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 6-A831  
Washington, D.C. 20554